Introduction

The platform features a component for material tracking. This is a voxel layer that can be used to track the location of material in space across time.

It is possible to interact with the Material Tracking Layer in two main general ways:

1. Submit new facts about material changes (write data)
2. Query information about material changes (read data)

Where “material change” is defined as:

1. A change in the attribute values of a tracked volume of material, or
2. a change in the location of a tracked volume of material

Like with other types of spatial data, the system uses a different pathway for writing versus reading. Data is ingested by processor services. This process is controlled by the REST API. It involves sending a POST request with a CSV file that contains the tracking operations the system needs to ingest. The API provides a callback mechanism to get notifications when ingestion completes. The REST API also provides the means to notify the tracking system about the beginning and completion of simulations.

Reading data out of the system, on the other hand, is performed by streaming services. The data could be used for visualizations or reporting/analysis and can be accessed from the C# client API. The REST API also allows accessing material tracking data from 1D constructs such as crushers and trucks.

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